
CIRM 2.0 Bridges Training Program

Grant Award Details

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Grant Type: Bridges II

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Investigator:

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Institution:	Humboldt State University
Type:	PI

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Grant Application Details

Application Title: CIRM 2.0 Bridges Training Program

Public Abstract:

In 2004 the people of California, recognizing the significance and potential of stem cell therapies for treatment of degenerative diseases like Alzheimer's, macular degeneration, etc., passed proposition 71 to fund stem cell research and development of stem cell therapies. The California Institute of Regenerative Medicine (CIRM) was established to manage the funds, plan and execute programs that would facilitate the development of stem cell therapies. Recognizing the need for a large workforce in stem cell research for the development of stem cell therapies, the initial phase of the program was focused on research and training of individuals in the stem cell fields. These efforts have resulted in a substantial increase in the number of scientists and technically trained individuals in the field of stem cell biology and, more importantly, an increase in number of laboratories and biotechnology industries focused on stem cell research and regenerative medicine in California.

In the second phase of the CIRM program, the focus is more on translational medicine where potential stem cell therapies initiated during the first phase of the CIRM objective are further developed for clinical trials and ultimately used as effective therapies for many degenerative diseases. The objectives of our proposal are to train some of our most talented students in translational medicine such that they have a good understanding of the process of development of stem cell therapies and the regulatory processes that govern such developments.

We propose to accomplish these goals by providing excellent training in stem cell biology at our home institution, which would generate a large pool of well-trained students with an aptitude for stem cell biology. From this pool of diverse students, we propose to select 10 students per year to participate in a 12 month research training in one the three premiere research institutions in the state, UC Davis, UCSF or Stanford University. These institutions have given written assurance that they will train our students in one of their stem cell and regenerative medicine laboratories and provide opportunities for them to interact with patients with ailments that have the potential to be cured by stem cell therapies. They also will be educated in the process of development of stem cell therapies as well as the ethical and moral considerations in the development of stem cell therapies and regulatory processes that govern such development.

We also propose to educate non-science majors and the public on the significance and recent developments in stem cell biology and regenerative medicine through workshops and seminars.

Statement of Benefit to California:

The substantial investment of funds by the people of California in stem cell biology and regenerative medicine through Proposition 71 was in recognition of the potential of stem cell therapies to cure hitherto "incurable" diseases like Alzheimer's, Parkinson's, muscular dystrophy, etc. The California Institute of Regenerative Medicine (CIRM) was established for the judicious administration of funds with proper public oversight to set a course to reach the ultimate objective of the proposition, cures for many of the ailments that have potential stem cell therapies. Even though the primary goal of the program was to improve the health of individuals, economic benefit to the state was another major consideration.

CIRM, to its credit, was able to achieve many of the goals set for the first five years of its 10-year plan by making the general public aware of stem cell research and regenerative medicine and funding many projects that have the potential to be developed into stem cell therapies.

CIRM launched the CIRM Bridges Training Program to develop a workforce technically trained in stem cell and regenerative medicine to meet the growing demand in the industry and research laboratories within the state. This tremendously successful program has managed to attract a large number of talented young people to the field and has generated a skilled workforce. It is estimated that the economic benefits to the state far outweigh the investment in the training of these students.

In the second phase of the CIRM program (CIRM 2.0), emphasis is being placed on the development of stem cell therapies by augmenting clinical trials and the delivery of stem cell therapies. With many CIRM funded stem cell research projects on the verge of entering the clinical trial phase, it is critical to develop a workforce knowledgeable in the field of stem cell therapies that has a good understanding of the regulatory process and the ethical issues involved in the development of such therapies. We have designed a CIRM 2.0 Bridges training program for Humboldt State University to provide a diverse group of students with training in stem cell and regenerative medicine. They will also have a good understanding of the needs of patients who could benefit from stem cell therapies as well as being educated with regard to the regulatory process and ethical issues. Our CIRM 2.0 Bridges program would contribute to the development of a well-trained workforce, which would have a tremendous impact on the economy of the state for years to come.

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